IDM Sensitivity Analysis: Time Gap Effects on Traffic Flow
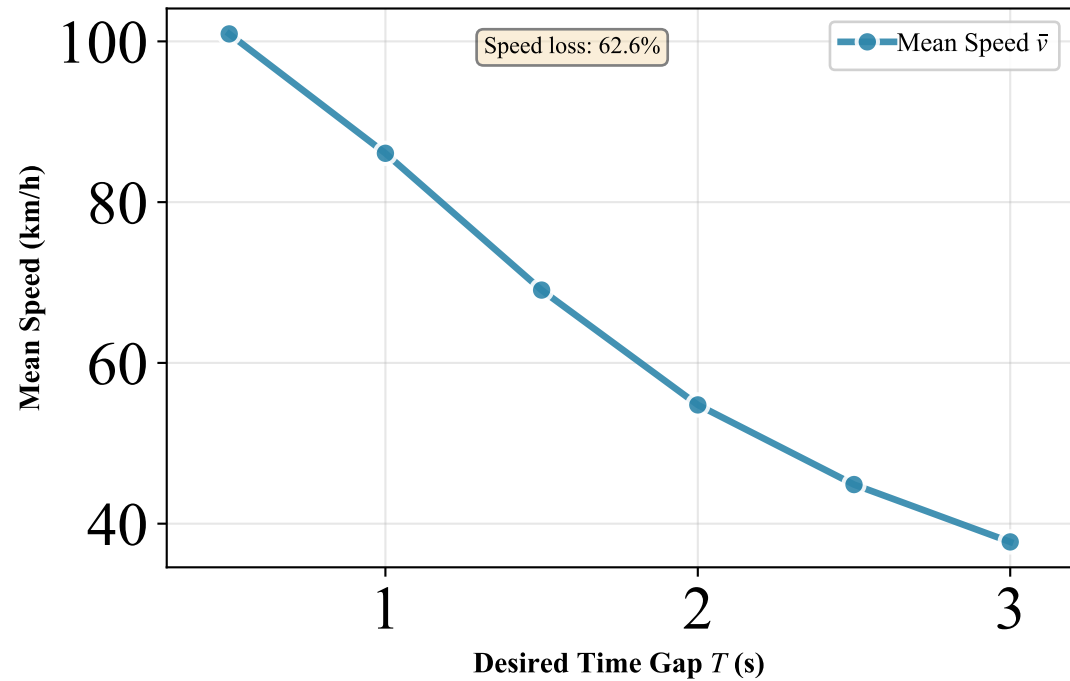
(a) Performance Degradation

Speed loss: 62.6%

Mean Speed $\bar{v}$

Mean Speed (km/h)

Desired Time Gap T (s)

(b) Temporal Evolution

Warmup

$T = 0.5$ s
$T = 1.0$ s
$T = 1.5$ s
$T = 2.0$ s
$T = 2.5$ s
$T = 3.0$ s

Mean Speed (km/h)

Time (s)